

SIEMENS

POLYDOROS SX 65/80

AX

Planning Guide

© Siemens AG 1994

The reproduction, transmission or use of this document or its contents is not permitted without express written authority. Offenders will be liable for damages. All rights, including rights created by patent grant or registration of a utility model or design, are reserved.

English

Doc. Gen. Date: 10.00

Print No.: RX63-065.021.01.05.02

Replaces: RX63-065.021.01.04.02

Chapter	Page	Revision
all	all	01
all	all	02
all	all	03
all	all	04
all	all	05

	Page
1 General Notes	1 - 1
General notes	1 - 1
Safety	1 - 2
System configuration	1 - 3
2 Room Planning	2 - 1
Dimensions of power cabinet	2 - 1
Dimensions of control console	2 - 2
3 Preparation for Installation	3 - 1
Electrical building installation	3 - 1
4 System Connections	4 - 1
Notes on cable run	4 - 1
Survey	4 - 2
Layout of fixed points	4 - 3
List of fixed points, POLYDOROS SX 65/80	4 - 4
List of the fixed points used	4 - 4
5 Technical Data	5 - 1
Electrical data	5 - 1
Power supply (max.)	5 - 1
Line resistance R_i for generator	5 - 1
Weights and heat dissipation	5 - 2
Environmental conditions	5 - 2
Packing and transport routes	5 - 2
Surface color	5 - 2
6 Transportation Specifications	6 - 1
7 Changes to Previous Version	7 - 1

This page intentionally left blank.

General notes

- With distribution of these revision level, all preceding planning guides, Speed - Infos (PG's) and drafts lose their validity.
- All layouts issued by the Planning Departments must bear a note referring to the installation and delivery conditions of Siemens Medical Engineering Group. The installation and delivery conditions must be submitted with the layouts.
- Unless otherwise specified, all dimensions are indicated in "mm".



- The symbol indicates a change (see revision status).



- Orientation points
Points specific to system components to which reference is made when positioning system components to each other or in the room.
The isocenter of a radiographic system is always illustrated as the orientation point.

- Fixpoints
Clearly marked points on system components, installation ceiling, walls or floor on which cable outlets are located.
Illustration in the drawings: circle with letter/number-combination.
The cable lengths establish the maximum fixpoint distances and thus the maximum distances between the individual system components.

- Room height
The room height is the distance measured from the top surface of the floor to the bottom surface of the ceiling structural elements (Unistrut rails) (bottom surface of drop ceiling).

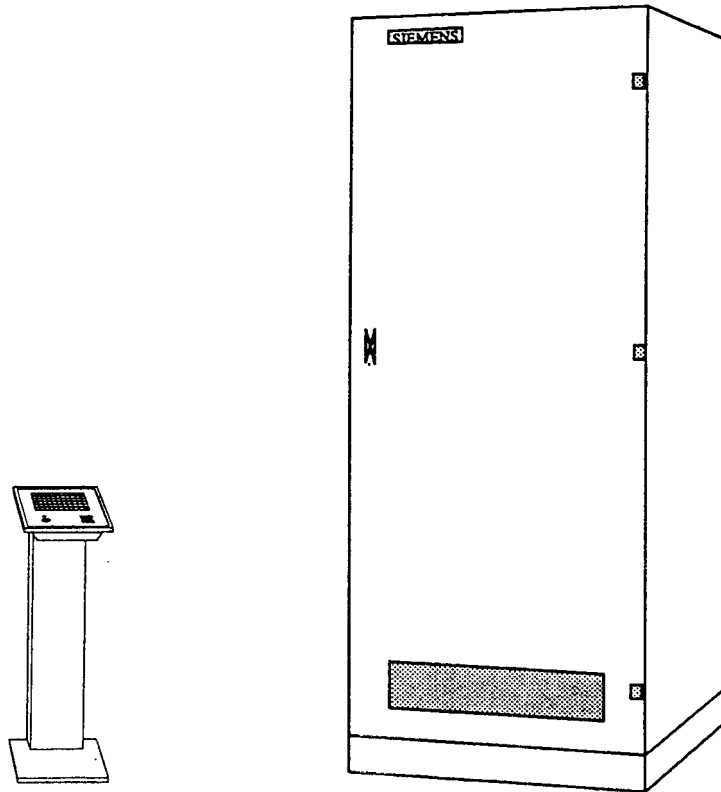
- Room lighting
According to DIN 68 68-57 (international standard being prepared), the lighting in rooms in which diagnosis is made on image playback devices (monitors) must meet the following requirements:
adjustable, no anti-glare screen, reproducible adjustment of lighting (e. g. dimmer with scale),
no glare or reflection from windows, lights and light boxes in the standard working position of the monitors.

Hotline + 49 (9191) 18 - 8080

Safety

- The provisions of the relevant fire protection regulations must be observed for the premises.
- The system has been developed according to EN 60601 - 1.
- Minimum dimensions (e. g. room heights, safety distances) indicated in the planning guides are marked "min."
- Basic strength against electromagnetic sources of interference.
Result of lightning discharges.
The protection targets of the different lightning protection areas up to the unit connection are also specified in the IEC 1024, DIN 48810, VDE 0675 and in the DEMVT recommendations.

System configuration



Power distributor

To be provided by the customer near the system (recommendation)

External loads

Do not connect to the supply mains:

E-machines, air conditioners, elevators and general external loads

Cables belonging to other systems

Provide for shielding measures or disconnect from all generator cable groups

High - voltage cables (max. 24 m)

Run them separately from the power cables, control cables and signal cables

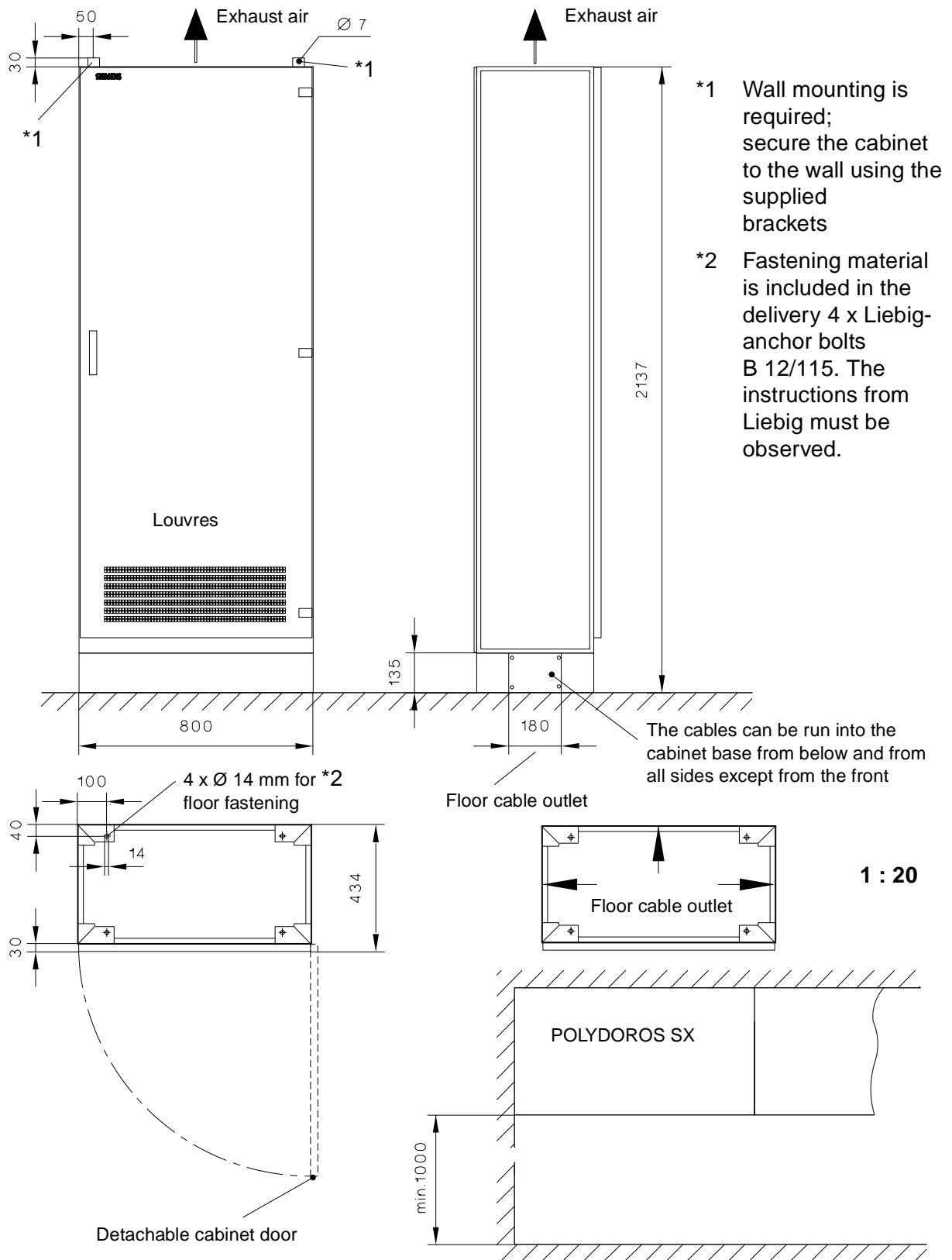
Fiber optic cables

It may be necessary to lay them separately, or lay them in closed cable conduits

X - ray tube assemblies

max. 2 tube assemblies can be connected (optionally 3 tube assemblies)

Dimensions of power cabinet

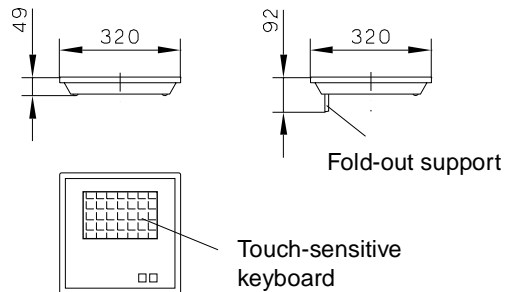


NOTICE

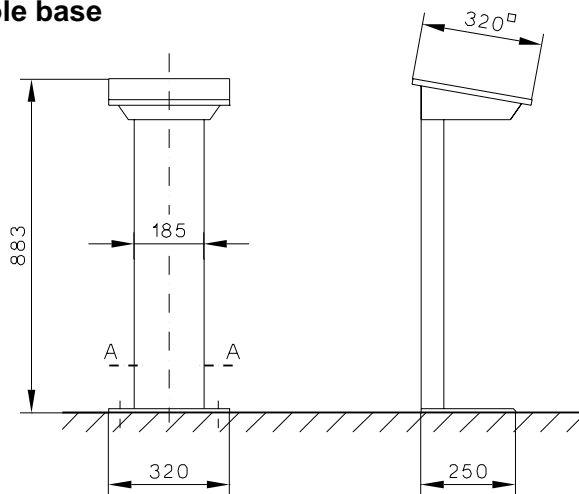
With the cover panel for the cabinet pointing to the ceiling, make sure that heated air can move out freely and that there is no blockage of heated air.

Dimensions of control console

Generator control console

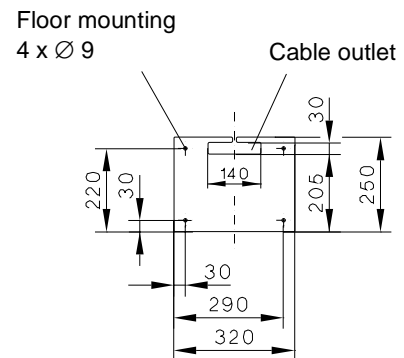


Generator control console with console base



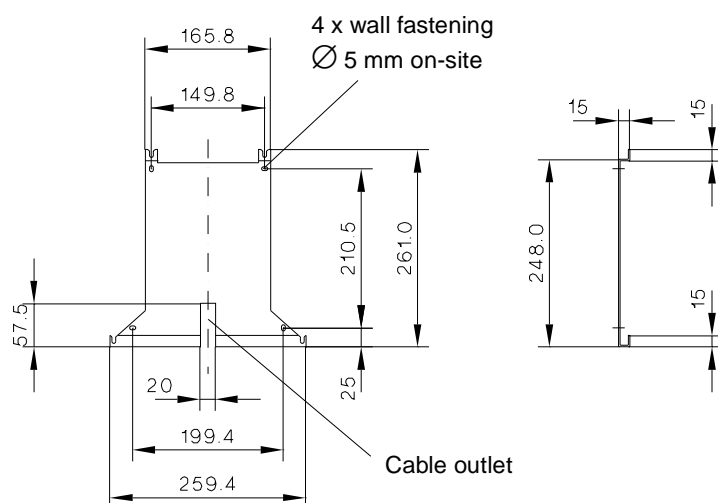
Console base floor fastening

Section A - A



1 : 20

Wall bracket for generator control console



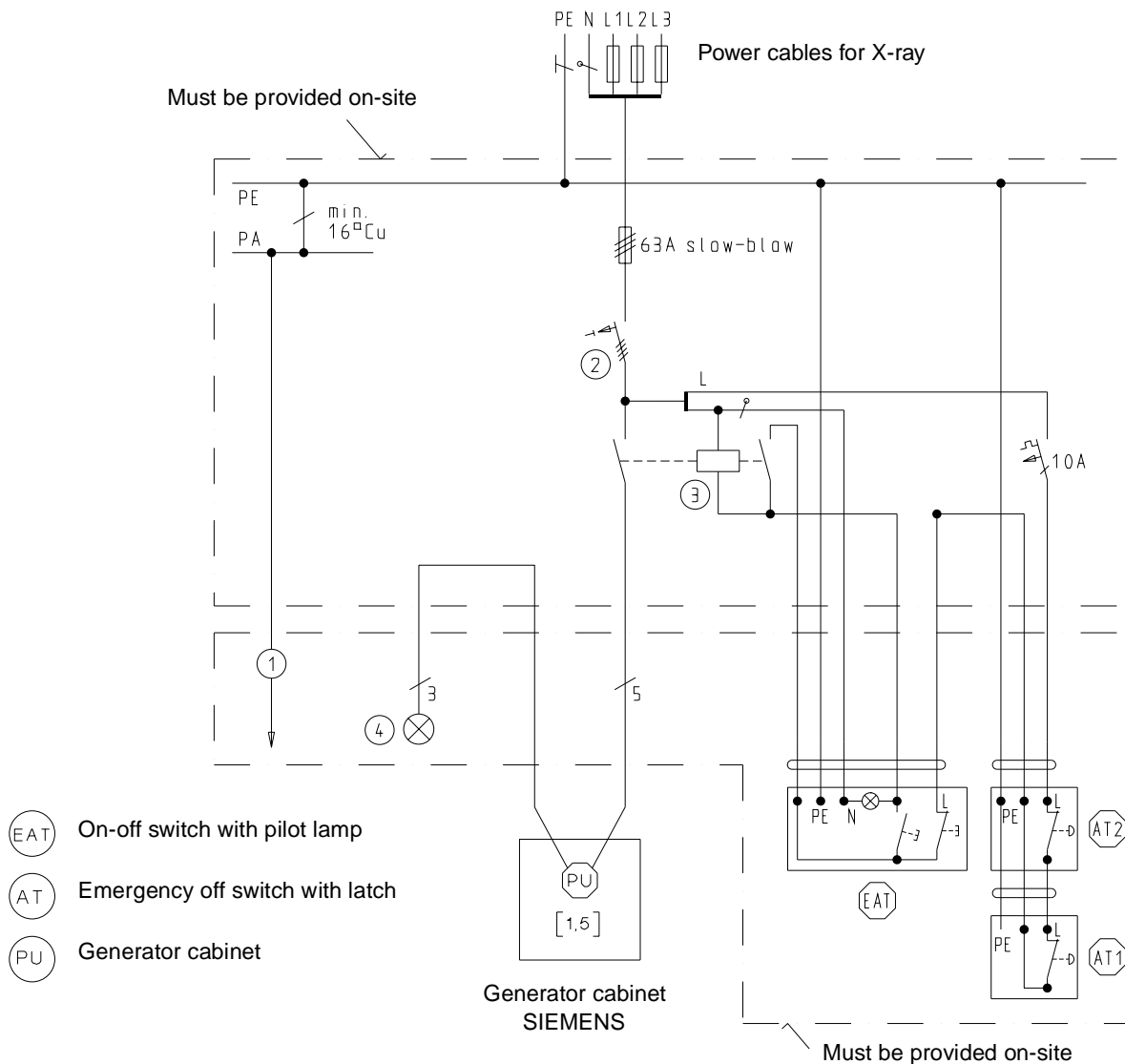
1 : 10

NOTICE

The generator control console is suspended in the wall bracket.

Electrical building installation ◆

Recommendation for on-site power distributor per DIN VDE 0107 national regulations



1 To external conductive parts

◆ 2 Per DIN EN 50178 Classification VDE 0160, "Equipping of high voltage systems with electronic operating elements", the following FI switches must be used exclusively:

For $U(N) = 3 \sim 400/415 \text{ V}$: $I(N) = 63 \text{ A}$, $I_{dN} = 30 \text{ mA}$ for AC and pulsed as well as smooth DC currents.

- SIEMENS iii-Center Order No. FI 5SZ3 466 0KG00 all-current sensitive
- Order from SPH2 (Med Department, previously INAK: Part No. 49 54 470 Y7933)
- (Width of the FI switch is 144 mm = 8TE, install on standard rail)

For countries in which this standard does not apply, the following ground fault interrupters can be used for voltages of $> 415 \text{ V}$: With $U(N) > 3 \sim 415 \text{ V}$; $I(N) = 125 \text{ A}$, $I_{dN} = 30 \text{ mA}$

- Doepke-Norden (order from SPH2, Part No. 51 41 168 Y7933)

3 System breaker

◆ 4 Option: radiation display

[] Figures are free cable lengths in m

This page intentionally left blank.

Notes on cable run

Suggested cable run

Cable duct depth 60 mm

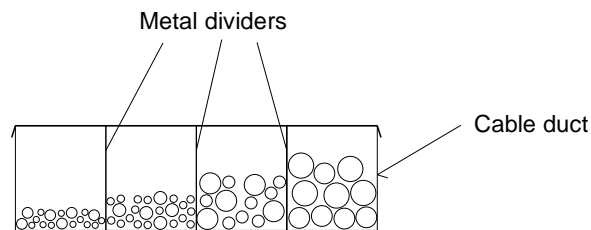
if required, deeper at cable crossovers.

Run high voltage and power cables separately from control and video cables (use shielding if possible).

Make absolutely sure to:

Avoid cable looping and, as far as possible, crossovers.

- Run cables in separate conduits or closed cable ducts.
- If open cable ducts are used, run the cables separately using metal dividers or similar devices.



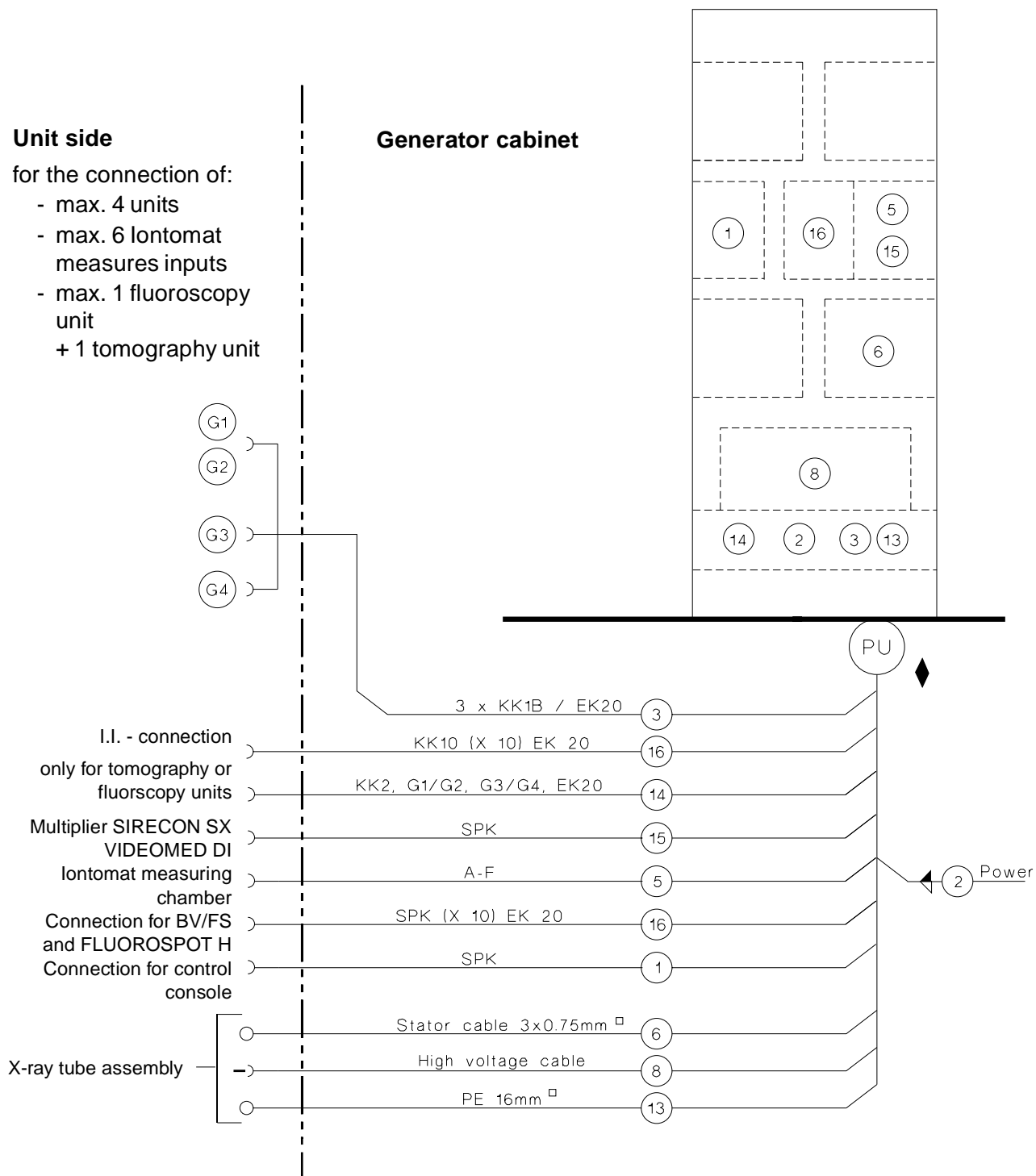
Survey

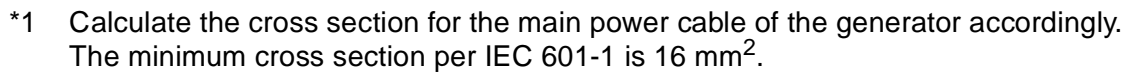
Unit side

for the connection of:

- max. 4 units
- max. 6 Iontomat measuring inputs
- max. 1 fluoroscopy unit
- + 1 tomography unit

Generator cabinet

**NOTICE****For systems deliveries, the relevant PG's must be observed !**



List of fixed points, POLYDOROS SX 65/80 ♦

Cable harness No.	from fixed point	to fixed point	Cable duct cross-section in mm ²	Conduit, diameter inside in inches	Minimum opening in mm	Maximum fixed point distance in m	Remark
1	PU	B1	1100	2	46 x 24	—	B1 = Unit connection
2a	PU	N	550	2	46 x 12	8	Option: 20m
2b	PU	N	550	2	46 x 12	6.6 or 18.6	Option: Console base
2c	PU	N	550	2	46 x 12	approx. 8 or 20	Option: Wall or table installation, max. fixed point distance depending on attachment length
3	PU	B1	2200	3	Ø 42	—	High-voltage cable
4	PU	—	—	—	—	—	On-site power cable, see *1 Page 4-3

List of the fixed points used

Fixed point	Subsystem	Remark
B1	Unit	Floor fixed points
N	Generator control console	Floor fixed points
PU	Generator	Floor fixed points

Electrical data

	Power supply	Input power		Internal fuse
		Fluoroscopy	Radiography	
POLYDOROS SX 65	3/N/PE ~ 400/440/480 V ± 10 % *1 50/60 Hz ± 1 Hz	2.1 kVA	max. 120 kVA	50 A slow-blow
POLYDOROS SX 80	3/N/PE ~ 400/440/480 V ± 10 % *1 50/60 Hz ± 1 Hz	3.3 kVA	max. 145 kVA	50 A slow-blow

*1 For 440/480 V, a line - matching transformer is required (Part No. 48 19 756 X1269) which is installed in the generator on-site work

Power supply (max.)

Power supply	400 V	440 V	480 V
max. main power PL SX 65 (Pulse - loading)	173 A eff (max. 100 mS)	157 A eff (max. 100 mS)	145 A eff (max. 100 mS)
max. main power PL SX 80 (Pulse - loading)	209 A eff (max. 100 mS)	190 A eff (max. 100 mS)	175 A eff (max. 100 mS)

Line resistance R_i for generator

(to VDE 0750, part 21, IEC 601-2-7, max. values in ohms at UN - 10 %)

UN (V) P (kW)	65 kW	80 kW
400	0.17	0.11
440	0.20	0.14
480	0.24	0.16

Operation with higher line R_i is possible at reduced power.

Weights and heat dissipation

	Weight [kg]	Heat dissipation [W]
Power cabinet	approx. 290	approx. 900
Control console	approx. 2.5	max. 20
Console base	approx. 27	n.a.
Wall bracket	approx. 1.0	n.a.

Environmental conditions


	Operation	Transport	Storage
permissible ambient	+ 10° ... + 40° C	- 40° ... + 70° C *1	- 40° ... + 70° C *1
permissible relative air humidity	20 % ... 75 %	10 % ... 95 %	10 % ... 95 %
permissible air pressure	700 hPa ... 1060 hPa	500 hPa ... 1060 hPa	500 hPa ... 1060 hPa

*1 Restrictions in the case of oil-filled containers high voltage transformer/tube assemblies only up to - 20° C.

Packing and transport routes

largest crate	L 2240 x W 900 x H 580 mm
heaviest single part	approx. 360 kg
minimum door width and floor width for transport	min. 815 mm Door width approx. 940 mm Floor width

Surface color

Main color	white mottled lacquer, Med. surface No. 4146 similar RAL gray - white 9002
Combination color	anthrazit mottled lacquer, Med. surface No. 4076
 For information on spray cans and touch-up applicators, see Project Manager Handbook (PMH) Chapter 1	

n.a.

This page intentionally left blank.

Chapter	Page	Change
		Revision level changed from 04 to 05
3	3-1	Text 2 (PG Speed-Info 006/2000/AX) updated, Text 4 updated
4	4-2	Survey updated
4	4-3	Layout of fixed points updated
4	4-4	List of fixed points updated
5	5-2	Surface color updated
7	7-1	Changes to previous version updated

This page intentionally left blank.